

CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1. An improved apparatus for removing dust from a vent of the type forming an angle with a vent opening and having a vent diameter, comprising:

(a) a flexible tubular conduit having a conduit diameter substantially less than said vent diameter for allowing said tubular conduit to be passed through said angle in said vent and an intake opening at one end and an exhaust opening at the opposite end;

(b) a flexible shaft located within said flexible tubular conduit and extending substantially between said intake and said exhaust opening;

(c) a brush coupled to said flexible shaft at approximately said intake opening of said flexible tubular conduit, said brush having a plurality of flexible bristles located externally of said flexible tubular conduit, and having a brush diameter substantially greater than said conduit diameter of said flexible tubular conduit, wherein said brush is adapted in

diameter to substantially occlude said vent substantially
obstructing the flow of air therethrough;

(d) motor means, coupled to said flexible shaft at
approximately said exhaust opening of said flexible
5 tubular conduit, for rotating said flexible shaft causing
said brush to dislodge said dust from said vent;

(e) vacuum means for entraining said dust dislodged by
said brush and drawing said dust from said intake
opening of said flexible tubular conduit to said exhaust
10 opening of said flexible tubular conduit; and

(f) swivel cuff means disposed between the vacuum
means and the exhaust end.

2. An apparatus according to Claim 1, wherein said brush bristles
are located externally of said flexible tubular conduit on a
15 brush shaft, the brush shaft being coupled to the flexible shaft.

3. An apparatus according to Claim 1, wherein said flexible
rotatable shaft is concentrically disposed within said flexible
tubular conduit, and has a diameter substantially smaller than
the diameter of said flexible tubular conduit for allowing
20 unobstructed air flow in said flexible conduit.

4. An apparatus according to Claim 1, wherein said flexible rotatable shaft provides rigidity to said flexible tubular conduit.
5. An apparatus according to Claim 1, wherein the speed of rotation of said shaft motor means is controllable independently of said vacuum means.
6. An apparatus according to claim 1, wherein said flexible bristles of said brush are radially disposed about said brush shaft.
7. An apparatus according to claim 1, further comprising:
 - a filter means coupled to said exhaust opening of said flexible tubular conduit for capturing said dust.
8. An apparatus according to Claim 1, further comprising:
 - a means for filtering said dust entrained by said vacuum means, and
 - means for connecting said flexible tubular conduit to said means for filtering, and diverting said dust entrained by said vacuum means away from said motor means.
9. An apparatus according to Claim 1, further comprising:
 - a collar, adapted to rotatably carry said brush shaft, disposed in said intake opening of said flexible tubular conduit, substantially occluding said intake opening and

having at least one port for allowing air flow from said
vent into said flexible tubular conduit.

10. The method of removing dust from a vent of the type forming
an angle with a vent opening and having a vent diameter,
5 comprising in combination the steps of:

providing an external brush coupled to a flexible shaft,
the flexible shaft being, in turn, disposed within a
flexible vacuum conduit having a diameter substantially
less than said vent diameter for allowing said flexible
10 conduit to be passed through said angle in said vent;

inserting said external brush into said vent opening,
thereby substantially occluding said vent;

passing said flexible conduit inward along said vent
through said angle;

15 rotating said flexible shaft to cause said brush to rotate
in said vent and dislodge said dust;

applying a vacuum source to said flexible vacuum
conduit to draw an air stream containing said dust from
said vent into said conduit; and

20 removing said brush from said vent.

11. A method according to Claim 10, wherein the steps of rotating said flexible rotatable shaft, applying said vacuum source, and removing said brush are performed simultaneously.

12. A method according to Claim 10 further comprising:

5 filtering said air stream produced by applying said vacuum source to said vacuum conduit to remove dust.

13. An apparatus for removing dust from a vent of the type forming an angle with a vent opening and having a vent diameter, comprising:

10 a flexible tubular conduit having a conduit diameter substantially less than said vent diameter for allowing said tubular conduit to be passed through said angle in said vent and an intake opening at one end and an exhaust opening at the opposite end;

15 a flexible shaft located within said flexible tubular conduit and extending substantially between said intake opening and said exhaust opening;

 a brush coupled to said flexible shaft at approximately said intake opening of said flexible conduit, said brush
20 having a plurality of flexible bristles located externally of said flexible tubular conduit and having a brush

diameter substantially greater than said conduit
diameter of said flexible tubular conduit, wherein said
brush is adapted in diameter to substantially occlude
said vent substantially obstructing the flow of air
therethrough;

motor means, disposed in said single mobile housing,
coupled to said flexible shaft at approximately said
exhaust opening of said flexible tubular conduit, for
rotating said flexible shaft causing said brush to dislodge
said dust from said vent;

vacuum means disposed in said single mobile housing
for entraining said dust dislodged by said brush and
drawing said dust from said intake opening of said
flexible tubular conduit to said exhaust opening of said
flexible tubular conduit; and

swivel cutoff means disposed between the said vacuum
and said flexible tubular conduit.